

Audit



Report

**BALLISTIC MISSILE DEFENSE ORGANIZATION
YEAR 2000 INITIATIVES**

Report No. 98-180

July 16, 1998

**Office of the Inspector General
Department of Defense**

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Acronyms

BMDO
NMD
THAAD
Y2K

Ballistic Missile Defense Organization
National Missile Defense
Theater High Altitude Area Defense
Year 2000



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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July 16, 1998

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (COMMAND,
CONTROL, COMMUNICATIONS, AND
INTELLIGENCE)
DIRECTOR, BALLISTIC MISSILE DEFENSE
ORGANIZATION
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Ballistic Missile Defense Organization Year 2000 Initiatives
(Report No. 98-180)

We are providing this report for information and use. We considered management comments on the draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Raymond A. Spencer at (703) 604-9071 (DSN 664-9071), or Mr. Thomas S. Bartoszek at (703) 604-9014 (DSN 664-9014). See Appendix C for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Liebermann", is positioned above the printed name.

Robert J. Liebermann
Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 98-180
(Project No. 8AB-3004)

July 16, 1998

Ballistic Missile Defense Organization Year 2000 Initiatives

Executive Summary

Introduction. Information technology systems have typically used two digits to represent the year, such as "98" representing 1998, to conserve electronic data storage and reduce operating costs. With the two-digit format, however, the year 2000 is indistinguishable from 1900. As a result of this ambiguity, computers and associated systems and application programs that use dates to calculate, compare, and sort could generate incorrect results when working with years after 1999. This is one of a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge.

Audit Objectives. The overall audit objective was to determine whether the initiatives of the Ballistic Missile Defense Organization and its field activities to address the year 2000 computer problems were effective and whether they complied with the DoD Year 2000 Management Plan. We also were to evaluate the management control program as it applied to the audit objectives, but because it was urgent to report the audit results to senior management, we did not formally evaluate related management controls.

Audit Results. The Medium Extended Air Defense System program and the National Missile Defense programs initiated actions to ensure that future contracts include year 2000 compliance clauses (Finding A). However, the April 1998 quarterly year 2000 report from the Ballistic Missile Defense Organization did not accurately report progress made in solving year 2000 problems. In March 1998, BMDO did take positive action to address the year 2000 problem by establishing a year 2000 project management office, but additional work is still needed. Also, officials from the Ballistic Missile Defense Organization incorrectly approved the Theater High Altitude Area Defense system and all four of the National Missile Defense program elements to proceed beyond the assessment phase (Finding B).

As a result, DoD received and forwarded to OMB overstated progress reports on the year 2000 effort for the Theater High Altitude Area Defense and the National Missile Defense programs. In addition, the risk for a timely solution to the year 2000 problem for these programs was increased. The audit results are detailed in Part I.

Summary of Recommendations. We recommend that the Chief Information Officer, Ballistic Missile Defense Organization, review the year 2000 effort for the Theater High Altitude Area Defense program and determine if it meets the exit criteria for the

assessment phase; determine the correct reporting phase for the next DoD year 2000 quarterly report; and implement procedures to certify that the exit criteria are met for each mission-critical program before granting approval for it to proceed to the next year 2000 phase. In addition, we recommend that the Chief Information Officer, Ballistic Missile Defense Organization, require the National Missile Defense program office to obtain a detailed assessment plan from each program element.

Management Comments. The Director, Ballistic Missile Defense Organization, concurred with the findings and all the recommendations except requiring a separate assessment plan for each program element. However, the actions taken by management meet the intent of that recommendation. See Part I for a summary of management comments and our responses and Part III for the complete text of management comments.

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Part I - Audit Results

Audit Background

Year 2000. The year 2000 (Y2K) problem is rooted in the way dates are recorded and computed in information technology systems. For the past several decades, computer systems have typically used two digits to represent the year, such as "98" representing 1998, to conserve on electronic data storage and reduce operating costs. With the two-digit format, however, the Y2K is indistinguishable from 1900. Because of its potential operational impact on Government computers, the General Accounting Office identified Y2K as a high-risk program. DoD also identified Y2K as an uncorrected material management control weakness in its Annual Statement of Assurance for FY 1997.

Ballistic Missile Defense Organization. The mission of the Ballistic Missile Defense Organization (BMDO) is to develop and field effective military defenses against ballistic missile attacks. To accomplish this, BMDO manages, directs, and executes a program that focuses on the development and deployment of the Theater Air and Missile Defense to meet the missile threat to deployed U.S. and allied forces, and the National Missile Defense (NMD) to protect the United States.

To facilitate the Y2K reporting requirements of DoD, BMDO identified two categories of systems: mission support, which is administrative; and mission oriented, which is needed to acquire and deploy a weapon system. BMDO did not identify any mission-support systems as mission critical. In the mission-oriented category, BMDO identified two weapon systems as mission critical. They include the Theater Air and Missile Defense system and the NMD system. The Theater Air and Missile Defense system consists of the Theater High Altitude Area Defense (THAAD), the AEGIS Baseline 6 Phase 3, the Standard Missile II Block IV/IVA, the Standard Missile III Lightweight Exo-Atmospheric Projectile, the Medium Extended Air Defense System, and the Patriot Advanced Capability 3 acquisition programs. The NMD system is one acquisition program consisting of four BMDO-sponsored elements including the Ground Based Radar; the Battle Management Command, Control, and Communications; the Ground Based Interceptor; and the Upgrade Early Warning Radar. BMDO established an NMD joint program office in April 1997 to manage and integrate the program elements into a cost-effective and operationally sound system designed to protect the 50 States from a ballistic missile attack. Each mission-critical system is described in Appendix B.

Because the Theater Air and Missile Defense and NMD systems rely heavily on computer systems to carry out their operations, the Y2K issues can affect every aspect of the BMDO mission. As a result of the ambiguity, computers and associated systems and application programs that use dates to calculate, compare, or sort could generate incorrect results when working with years after 1999.

DoD Y2K Guidance. The DoD Y2K Management Plan (DoD Management Plan), Version 1.0, April 1997, details the five-phase Y2K management process, the key responsibilities of DoD Components, the quarterly reporting requirements, and the timeline for completing each Y2K phase. The DoD Management Plan also states the criteria for DoD Components to determine the appropriate Y2K phase

for each system noted in the quarterly report. Each phase listed below represents a major Y2K program activity or segment. Target completion dates range from December 1996 through November 1999.

- Phase I - Awareness. Organization and planning take place. Target completion date: December 1996.
- Phase II - Assessment. Scope of Y2K impact is identified and systems-level analysis takes place. Target completion date: June 1997.
- Phase III - Renovation. Required system fixes are accomplished. Target completion date: December 1998.
- Phase IV - Validation. Systems are confirmed as Y2K compliant through assorted testing-and-compliance processes. Target completion date: January 1999.
- Phase V - Implementation. Systems are fully operational after being certified as Y2K compliant. Target completion date: November 1999.

Each system must meet defined exit criteria before proceeding into the next phase.

Audit Objectives

The overall audit objective was to determine whether the initiatives of BMDO and its field activities to address the Y2K computer problem were effective. Specifically, we determined whether BMDO and its field activities have complied with the DoD Management Plan. We were also to evaluate the management control program as it applied to the audit objectives but, because senior DoD management urgently needed the audit results and DoD recognizes the Y2K issue as a material management control weakness area in the FY 1997 Annual Statement of Assurance, we did not formally evaluate related management controls. See Appendix A for a discussion of the scope and methodology and prior audit coverage.

Finding A. Ballistic Missile Defense Organization Year 2000 Contract Compliance

Officials from the BMDO-sponsored Medium Extended Air Defense System program office and the NMD program office initiated positive actions to ensure that future contracts for the programs will include Y2K-compliance clauses. Program officials from the Medium Extended Air Defense System program changed the information to be provided to current contractors and BMDO officials planned to revise the lead system integrator contract after we identified the omission of Y2K compliance language in the solicitations sent to prospective bidders. Accordingly, contracts for the design and development of the Medium Extended Air Defense System and the integration of the NMD program should be Y2K compliant.

DoD Policy

DoD Y2K Guidance. The DoD Management Plan, Version 1.0, April 1997, states that DoD will purchase only Y2K-compliant products and that DoD contracts will use Y2K-compliance language if the information technology involves or performs date-and-time processing after December 31, 1999.

Contracting Actions

Of the six acquisition programs included in the Theater Air and Missile Defense system, only the Medium Extended Air Defense System did not include a requirement that the software be Y2K compliant in the current contract. In addition, the request for proposal for the NMD system integration did not require the software to be Y2K compliant.

Medium Extended Air Defense System. During the current program definition and validation phase, which is scheduled to end in March 1999, the Medium Extended Air Defense System contract requires that both contractors deliver a proposal for the design and development phase of the program. The contract requires that the international contracting agency for the Medium Extended Air Defense System provide the two current contractors with final instructions on preparing their proposals and the program structure. The contracting agency must also submit information on how it will evaluate the contractors' proposals.

The February 1998 instruction (draft Version 4.0) did not require that the system software be Y2K compliant. In addition, the BMDO comments on the draft instruction did not include the DoD requirement that agencies purchase only Y2K-compliant products and did not address the Y2K issue.

Finding A. Ballistic Missile Defense Organization Year 2000 Contract Compliance

In March 1998, we informed program officials of the Y2K deficiency in the instructions. The officials stated that they would incorporate the requirements for the proposals to be Y2K compliant in the instruction after the next meeting of the steering committee that manages the Medium Extended Air Defense System international program. The steering committee must approve the inclusion of the Y2K-compliance information in the instructions it sends to the contractors. In May 1998, program office officials informed us that the steering committee agreed to include a clause in the information sent to the offerors that required all software to satisfy the participating nations' Y2K initiatives. The program office will also incorporate the Y2K requirements into the International Technical Requirements Document, which defined the technical parameters for developing the system. In this way, the proposals submitted by the two contractors will meet the Y2K technical parameters for the system.

NMD. The Y2K-compliance clause was not in the existing contracts for all four elements of the NMD program as of March 1998. Program officials stated that the lead system integrator contract should include Y2K-compliance language. The integration contract will incorporate all system elements including interceptors, sensors, and command and control functions into a deployable, cohesive NMD system. The contract requires design and development and test and evaluation services to ensure the success of the integrated system tests that are planned for the fourth quarter FY 1999 and the deployment readiness review that is planned for the third quarter FY 2000.

The NMD Request for Proposal, August 1997, amended September 1997, for the integration effort did not contain Y2K-compliance language. BMDO officials received the best and final offers from two contractors in March 1998 and awarded the integration contract without a Y2K-compliance clause for the NMD system in May 1998.

After we identified the deficiency, BMDO officials initiated actions to include a Y2K-compliance clause in the integration and development contract. NMD officials prepared a draft modification to the lead system integrator contract and they plan to add a Y2K-compliance clause using specific text from the Federal Acquisition Regulation. The NMD program will then be Y2K compliant.

Conclusion

We commend the Medium Extended Air Defense System and NMD program officials for taking prompt action to include a Y2K-compliance clause in their contracts for new system development. This will help DoD in its effort to ensure that no system is adversely affected by Y2K problems. Because management took corrective action during the audit, no recommendations are necessary.

Finding B. Ballistic Missile Defense Organization Year 2000 Reporting

The BMDO Y2K quarterly report, dated April 1998, did not accurately report BMDO's progress in solving the Y2K problem for the THAAD program. In addition, BMDO later incorrectly approved the THAAD and the NMD programs to exit the assessment phase. This occurred because BMDO officials did not verify whether the THAAD and the NMD program had met the requirements of the Y2K assessment phase. As a result, DoD reported and relied on inaccurate information and the risk of Y2K noncompliance and system failure increased.

Y2K Quarterly Report

DoD Reporting Requirements. A March 12, 1997, memorandum from the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) requires DoD Components to submit Y2K quarterly status reports to satisfy requirements of DoD and the Office of Management and Budget. Quarterly reports are used by the DoD Chief Information Officer to oversee and monitor progress, to identify and prioritize risks, and to solve Y2K problems as quickly as possible. In addition, if erroneous information goes unrecognized, computers and weapon systems may fail, and the problem will perpetuate through interfaces and other automated information systems.

Assessment Phase Requirements

The purpose of the assessment phase is to gather and analyze information to determine the size and scope of the Y2K problem. DoD Components must develop a Y2K cost estimate to repair an existing system, a contingency plan to consider the consequences of noncompliance, and a Y2K assessment plan. The assessment plan should include the size and scope of the Y2K problem; necessary infrastructures; software inventories, including contractor off-the-shelf products; and should identify system interfaces.

For a system to advance from the assessment phase to the renovation phase, the DoD Management Plan requires the Service or DoD Component to document and complete the following exit criteria:

- an assessment plan,
- a renovation strategy,
- a Y2K-resource strategy and plan,

- a validation strategy, and
- a risk-management and contingency strategy.

Progress Reported

Of the five acquisition programs that we reviewed in the Theater Air and Missile Defense system and the four program elements of the NMD program, BMDO incorrectly reported THAAD and NMD program progress in solving the Y2K problem.

Y2K Reporting for the THAAD. BMDO incorrectly reported in the January 1998 quarterly report that the THAAD program was in the validation phase. This was based on inaccurate information that the THAAD program office had included in the Defense Integrated Support Tools database, which was the official inventory of DoD systems and contained information on hardware, the Y2K phase, and interfaces.

In February 1998, the THAAD program office submitted a technical survey to BMDO that disclosed the Y2K impact on all systems, DoD Components, software, and interfaces. Based on its review of the survey results, BMDO identified that the THAAD program office had not met the exit criteria of the assessment phase. Accordingly, BMDO moved the program back to the assessment phase.

THAAD Y2K Assessment. Also in February 1998, after BMDO placed the THAAD program back into the assessment phase, the THAAD program office completed a second Y2K assessment of the THAAD software, contractor and Government off-the-shelf items, and system interfaces, resulting in BMDO approval of the program to proceed to the renovation phase.

Y2K Reporting for the NMD. NMD joint program officials incorrectly indicated that the NMD program had successfully completed the requirements of the Y2K assessment phase in early February 1998. This decision was based on the completion of the assessment phase exit criteria that included an assessment plan. As a result, in February 1998, BMDO approved the program to proceed to the validation phase because the program was new development and the joint program office did not consider that the renovation Y2K phase was applicable.

BMDO Oversight

BMDO Realignment Actions. In March 1998, BMDO established a Y2K project office to realign management. The office established procedures to monitor and track system status and to make weekly reports to BMDO management. They use metrics to capture phase status, memorandum of agreements activities, exit criteria, and auditing and compliance validation. In addition, the project management office reviews documentation before moving the system on to the next phase. Further, the project management office instituted a compliance

Finding B. Ballistic Missile Defense Organization Year 2000 Reporting

validation program that requires all systems to pass a review board before it can be certified as Y2K compliant. While these are positive steps to help in correcting the Y2K problem, BMDO must do more.

Quarterly Reporting for the THAAD. The January 1998 Y2K quarterly report was inaccurate because BMDO relied on incorrect information reported by the THAAD program office in the Defense Integrated Support Tools database that BMDO had not verified. DoD stopped using the Defense Integrated Support Tools database to collect Y2K information in March 1998, and will implement a new database by the summer of 1998. BMDO also incorrectly reported in the April 1998 quarterly report that the THAAD program was in the renovation phase because BMDO did not verify the information the THAAD program office submitted.

Renovation-Phase Approval for the THAAD. BMDO's review of the THAAD assessment-phase progress was insufficient. In a memorandum dated February 26, 1998, BMDO stated that it had reviewed THAAD program Y2K documentation and that all met the requirements for the assessment, renovation, validation, resource, and contingency strategies. In addition, BMDO stated that the THAAD program office met the required DoD assessment-phase exit criteria; therefore, it approved the THAAD program to proceed to the renovation phase.

The THAAD program office did not perform an adequate assessment of the Y2K issue. For example, its inventory of 63 contractor off-the-shelf products showed that 9 used a date in their applications but that their Y2K compliance was unknown. An additional 14 products showed both the date usage and the Y2K compliance as unknown. Furthermore, the assessment showed that the THAAD program office had not determined whether 12 of the 13 external interfaces were Y2K compliant.

As a result, the THAAD program office was unable to complete several requirements of the assessment plan. Specifically, the program office was unable to define the size and scope of the problem, document the necessary infrastructure, prepare cost estimates, and identify systems that required renovation. Therefore, BMDO should not have approved the program to proceed to the renovation phase. The THAAD program office did have strategies for renovation, validation, resources, and contingencies; however, because the program office did not perform an adequate assessment to determine the size and scope of the problem, which is an essential ingredient and the foundation for developing the strategies, the strategies are ineffective.

NMD Completion of Assessment-Phase Exit Criteria. BMDO did not require an assessment plan from the NMD program elements but, instead, relied on the NMD joint program office assessment plan to meet the exit criteria requirements. Officials from the NMD joint program office developed an assessment plan, "NMD Year 2000 Assessment Phase Plan for the Remaining Stages," (The Plan), undated, to meet the exit criteria of the assessment phase. The Plan identified, in broad and general terms, the planned progression of the NMD program through the five-step Y2K phases and identified an NMD program strategy to complete the phases. The Plan provided start and release dates for each Y2K phase and general steps for certifying the systems as Y2K compliant. Of the four NMD program elements, only the Upgrade Early Warning Radar prepared an assessment plan.

Finding B. Ballistic Missile Defense Organization Year 2000 Reporting

The Plan did not address the necessary infrastructure and resources required to accomplish the testing tasks for each program element. The Plan also did not identify the size and scope of the Y2K problem, inventories, and system interfaces for each program element. The program office did have strategies for renovation, validation, resources, and contingencies that were included in the assessment plan; however, these strategies are ineffective because they do not address each element of the NMD program.

Officials from the BMDO NMD joint program office should have ensured that each NMD element prepared a comprehensive plan during the assessment phase. A comprehensive Y2K assessment plan minimizes costs and shifting of resources, establishes accurate schedules and milestones, identifies deficiencies, and lessens risks as a system progresses through the phases.

Conclusion

If BMDO officials had adequately reviewed and validated the information submitted by the THAAD program office, it is unlikely that BMDO would have reported the program in the validation phase and granted approval to advance to the renovation phase. BMDO reported and DoD relied on inaccurate information for the THAAD program.

Without an accurate and detailed Y2K assessment plan for the NMD program elements, system managers may underestimate the work and the resources required to make a system Y2K compliant. Performing an accurate assessment and developing a detailed assessment plan allows system managers to develop realistic milestones and increases the probability of meeting them.

As a result, the risk to solve the Y2K problem as it affected the THAAD program and NMD elements increased. If mission-critical computers supporting the THAAD or the NMD systems fail, the THAAD or the NMD systems themselves may also fail. And, if erroneous information goes unrecognized, it will perpetuate through interfaces and other automated information systems.

Therefore, it is vital that BMDO ensure that the requirements of each phase are met before granting approval to proceed to the next phase. BMDO needs to implement procedures to certify that a program has met the exit criteria before it is approved to proceed to the next Y2K phase. BMDO should have reviewed the Y2K effort for the THAAD and NMD programs and determined the correct Y2K reporting phases.

Recommendations, Management Comments, and Audit Response

B. We recommend that the Chief Information Officer, Ballistic Missile Defense Organization:

- 1. Review the year 2000 effort for the Theater High Altitude Area Defense Program to determine whether it meets the exit criteria for the assessment phase,**
- 2. Determine the appropriate reporting phase for the Theater High Altitude Area Defense Program's next quarterly report,**
- 3. Implement procedures to certify that the exit criteria are met for each mission-critical program before granting approval for the program to proceed to the next phase, and**
- 4. Require the National Missile Defense program office to obtain a detailed assessment plan from each program element that includes the size and scope of the Y2K problem; necessary infrastructures; inventories of all software, including contractor off-the-shelf products; testing; and identification of system interfaces.**

Management Comments. The Director, Ballistic Missile Defense Organization, concurred with all recommendations except the one that required a separate assessment plan for each program element. The Director stated that officials reviewed the exit criteria for the Theater High Altitude Area Defense program and determined that they met the exit criteria for the assessment phase and are properly reported in the Renovation Phase. In addition, officials established a Year 2000 Management Control Office and a compliance review program to certify that all Ballistic Missile Defense systems are diligent in the Y2K effort. They also established a compliance board to review all exit criteria before phase migration. Finally, officials stated that they reviewed all National Missile Defense exit criteria and have enough detailed information on which to base a valid assessment of the National Missile Defense Y2K situation.

Audit Response. The Ballistic Missile Defense Organization comments are responsive to recommendations B.1., B.2., and B.3. Although officials nonconcurred with recommendation B.4., the actions taken are responsive to the intent of that recommendation.

Part II - Additional Information

Appendix A. Audit Process

This is one in a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the Y2K computing challenge. For a listing of audit projects addressing this issue, see the Y2K webpage on IGnet at <http://www.ignet.gov>.

Scope

We reviewed the Y2K quarterly report for the first quarter ending December 31, 1997, that BMDO submitted to the Assistant Secretary of Defense (Command, Control, Communication, and Intelligence). We evaluated the completeness and reliability of the report in accordance with reporting requirements of the Chief Information Officer. We also evaluated its usefulness in reporting Y2K progress to the Office of Management and Budget and to Congress. At BMDO headquarters, we interviewed personnel responsible for issuing reporting guidance and collecting Y2K information from field activities, and interviewed Service personnel at BMDO field activities responsible for Y2K quarterly reporting.

We reviewed National Missile Defense program mission-critical elements including the Battle Management, Command, Control, and Communication; the Upgrade Early Warning Radar; the X Band Radar; and the Ground Based Interceptor. We also reviewed five of the six programs comprising the Theater Air and Missile Defense system. The programs were the Patriot Advanced Capability 3, the Theater High Altitude Area Defense; the Medium Extended Air Defense System, the Standard Missile II Block IV/IVA, and the Standard Missile Block III Lightweight Exo-Atmospheric Projectile. We did not review the AEGIS Baseline 6 Phase 3 program because the Inspector General, Department of the Navy, had just completed an inspection of the Naval Sea Systems Command Y2K program, which includes AEGIS, to assess the ability of the Navy to ensure that mission-critical systems will be Y2K compliant.

DoD-wide Corporate Level Government Performance and Results Act Goals. In response to the Government Performance and Results Act, the Department of Defense has established 6 DoD-wide corporate level performance objectives and 14 goals for meeting these objectives. The report pertains to achievement of the following objective and goal:

- **Objective:** Prepare now for an uncertain future.
- **Goal:** Pursue a focused modernization effort that maintains U.S. qualitative superiority in key war fighting capabilities. (DoD-3)

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to achievement for the following functional area objective and goal:

Information Technology Management Functional Area.

- **Objective:** Provide services that satisfy customer information needs.
- **Goal:** Upgrade technology base. (ITM-2.3)

General Accounting Office High Risk Area. The General Accounting Office has identified several high risk areas in the DoD. This report provides coverage of the Information Management and Technology high risk area.

Methodology

We performed this economy and efficiency audit from January through April 1998, in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

We reviewed material dated from December 1997 through April 1998. We evaluated BMDO policies and procedures for identifying, planning, and implementing corrections to systems affected by the Y2K problem. We did not use computer-processed data or statistical sampling procedures for this audit.

Prior Audit Coverage

The General Accounting Office and the Inspector General, DoD, have conducted multiple reviews related to Y2K issues. General Accounting Office reports can be accessed over the internet at [HTTP://www.gao.gov](http://www.gao.gov). Inspector General, DoD, reports can be accessed over the Internet at [HTTP://www.dodig.osd.mil](http://www.dodig.osd.mil).

Organizations and Individuals Visited or Contacted

We visited or contacted individuals and organizations within DoD, the General Accounting Office, and the North Atlantic Treaty Organization Medium Air Defense System Management Agency, Huntsville, Alabama. Further details are available on request.

Management Control Program

We did not review the self-assessment aspects of the management control program as it relates to the audit objectives because the Secretary of Defense Letter of Assurance for FY 1997 recognizes Y2K as a material management control weakness area. The audit findings indicate that controls have not been fully effective. The problems relate to the application of controls rather than their structure, and we found no additional material management control weaknesses in the Y2K conversion program.

Appendix B. Description of Year 2000 Mission-Critical Systems for the Ballistic Missile Defense Organization

Systems of Theater Air and Missile Defense

AEGIS Baseline 6 Phase 3. The Navy AEGIS system is a shipboard, anti-air warfare, area defense system that detects and tracks short- to medium-range theater ballistic missiles during their descent phase. The Navy Program Office Executive, Theater Area Defense, is the executive agent responsible for developing the program. AEGIS is currently in Phase II, "Engineering and Manufacturing Development."

Medium Extended Air Defense System. The Medium Extended Air Defense System is a multi-national North Atlantic Treaty Organization effort to develop a future divisional air defense system to replace existing missile systems. The program will include a missile, sensors and battle management, command, control, computers, and intelligence elements to satisfy the International Technical Requirements Document. The program is an Acquisition Category 1 program currently in the program definition and validation phase. The United States, Germany, and Italy signed the Memorandum of Agreement on May 28, 1996, to implement this phase with a 60, 25, and 15 percent cost-share, respectively. The Medium Extended Air Defense System Management Agency manages the program through a steering committee composed of members from the three countries who provide program direction and oversight. Two contractors are working in the current phase. BMDO funded the definition and validation phase of the program. The Army serves as liaison between the Medium Extended Air Defense System Management Agency and external organizations and represents U.S. interests in program matters.

Patriot Advanced Capability 3. The Army Patriot Advanced Capability 3 is an upgraded ground system and a new interceptor for the Army High-Medium Air Defense System. The executive agent for the Patriot Advanced Capability 3 is the Army Program Executive Office, Air and Missile Defense. The program is currently in Phase II, "Engineering and Manufacturing Development."

Standard Missile II Block IV/IVA. The Navy Standard Missile II Block IV/IVA is an interceptor used with AEGIS platforms to negate short- to medium-range theater ballistic missiles. The Navy Program Office Executive for Theater Area Defense is the executive agent for this program. The Standard Missile II Block IV/IVA is currently in Phase II, "Engineering, Manufacturing, and Development."

Standard Missile III Lightweight Exo-Atmospheric Projectile. The Navy Standard Missile III Lightweight Exo-Atmospheric Projectile is a sea-based exo-atmospheric interceptor to counter medium- to long-range theater ballistic missiles.

Appendix B. Description of Year 2000 Mission-Critical Systems for the Ballistic Missile Defense Organization

The Navy Program Office Executive for Theater Area Defense is the executive agent for this program. The program is currently in Phase I, "Program Definition and Risk Reduction."

THAAD. The Army THAAD mission is to defend and protect critical military assets and civilian population centers against theater ballistic missile threats. The THAAD will provide land-based area defense against short- and long-range theater ballistic missiles. The THAAD is in Phase I, "Program Definition and Risk Reduction."

NMD Program

The NMD program is designed to be a cost-effective and operationally sound system to protect the continental United States from a ballistic missile attack. The NMD-BMDO-funded portion of the program consists of multiple-service elements that include the Ground Based Interceptor; the Battle Management Command, Control, and Communications; the X Band Radar; and the Upgraded Early Warning Radar. On April 9, 1996, the Under Secretary of Defense for Acquisition and Technology designated NMD as a major defense acquisition program. The program is also a Deployment Readiness "3 plus 3" program, which is designed to develop and test for 3 years and deploy for the following 3 years if the threat materializes.

Appendix C. Report Distribution

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Under Secretary of Defense for Acquisition and Technology
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Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
 Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
Office of Information and Regulatory Affairs
Technical Information Center, National Security and International Affairs Division,
General Accounting Office

Non-Defense Federal Organizations and Individuals

Director, Defense Information and Financial Management Systems, Accounting and
Information Management Division, General Accounting Office

Chairman and ranking minority member of each of the following congressional committees
and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information, and Technology,
Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice,
Committee on Government Reform and Oversight
House Committee on National Security

Chairman and Vice Chairman of the following congressional committee:

Senate Special Committee on the Year 2000 Technology Problem

Part III - Management Comments

Ballistic Missile Defense Organization Comments



DEPARTMENT OF DEFENSE
BALLISTIC MISSILE DEFENSE ORGANIZATION
7100 DEFENSE PENTAGON
WASHINGTON, DC 20301-7100

PO

June 19, 1998

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Department of Defense Inspector General (DoDIG) Draft
Audit Report, "Ballistic Missile Defense Organization
Year 2000 Initiatives", DoDIG Report No. 8AB-3004

The Ballistic Missile Defense Organization (BMDO) conducted a review of the DoDIG Draft Audit Report, "Ballistic Missile Defense Organization Year 2000 Initiatives", DoDIG Report No. 8AB-3004.

The BMDO concurs with Finding B, one through three recommendations with the following comments. The first and second recommendations have been addressed. The BMDO Y2K Program Management Office (PMO) in conjunction with the BMDO/AQ Y2K OPR, CDR Haggerty, reviewed the previously submitted THAAD program office exit criteria and discovered several discrepancies with the January OSD Quarterly Report submission. The reporting phase was erroneously reported by PEO-AMD to BMDO and was subsequently corrected to place THAAD in the Assessment Phase on February 27, 1998. Following a submission of revised reports by PEO-AMD, CDR Haggerty upgraded THAAD's status to Renovation, as reported to Mr. Anthony Valletta, Acting ASD (C3I) on March 2, 1998. The exit criteria for THAAD to migrate from the Assessment Phase was subsequently re-reviewed by CDR Haggerty and the BMDO Y2K PMO, and contained sufficient information to migrate THAAD to the Renovation Phase. The THAAD system has many sub-components and BMDO will continue to reassess them. However, BMDO has met the exit criteria and can document that THAAD is currently in the Renovation Phase.

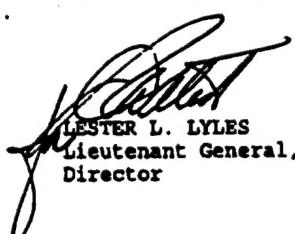
The third recommendation has been addressed by the BMDO leadership in the establishment of the BMDO Y2K PMO on March 2, 1998. The BMDO Y2K PMO personnel in conjunction with the system OPRs review all exit criteria submitted and the PMO grants the migration approval for each phase. This is further validated by the establishment of the BMDO Compliance Review Board (CRB) where all systems must be reviewed and certified as having performed due diligence in being Y2K compliant. The CRB certifies that the system is Y2K compliant and recommends to the CIO that they be approved for Y2K certification. Once approved, the CIO receives weekly BMDO Y2K status updates on the certification process.

Ballistic Missile Defense Organization Comments

Final Report
Reference

The BMDO does not concur with Finding B, fourth recommendation requiring the NMD Joint Program Office to obtain a detailed assessment plan from each system program office. The BMDO Year 2000 management has had major shifts within the last six months with the establishment of the BMDO Y2K Program Management Office (PMO). The PMO in conjunction with the NMD JPO have made significant efforts to meet the intent of the OSD Year 2000 program. The attached NMD memorandum and National Missile Defense Joint Program Office Year 2000 Compliance Initiative (submitted to the DoDIG Team in February 1998) are examples of the due diligence in complying with the DoD and BMDO Year 2000 Management Plans. The National Missile Defense Joint Program Office Year 2000 Compliance Initiative is the documented Assessment Phase exit criteria for the NMD system. Based upon the attached documents submitted by the NMD JPO, the BMDO feels that efforts to revisit the Assessment Phase would not be in the best interests of DoD or the NMD JPO.

My point of contact for this issue is Major Emily Andrew, BMDO/TOM, at (703) 604-3881.



LESTER L. LYLES
Lieutenant General, USAF
Director

Attachment:
As stated

*Omitted because of length. Copies will be provided upon request.

Audit Team Members

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